

Revision 1

# Phase 1 Habitat Survey The Arrows

09/10/2014

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Phase 1 Habitat Survey Map

# Executive Summary

This report is based on the findings of a Phase 1 habitat survey of a section of land near Lydney, Gloucestershire known as and referred hereafter as The Arrows, and was undertaken by Grant Riley on 4th July 2014 on behalf of Yorkley Court Community Farm. A planning application has been submitted (2014) by Yorkley Court Community Farm for a series of low-impact temporary dwellings on The Arrows and this report has been prepared to help identify any potential ecological constraints to the proposals.

The Arrows comprises of areas of dense and scattered scrub and an area of grassland. It is located between 10 Acre Wood and Yorkley Farm, off the Lydney Road. The habitat within The Arrows is not of significant wildlife value and is unlikely to provide suitable habitat for protected species. However, The Arrows is close to habitats of potentially high wildlife value (i.e. ancient woodland) which, in the absence of appropriate safeguards, could potentially be impacted by the proposed future use of the application site.

This report recommends a number of measures which should be adopted to ensure potential adverse impacts to wildlife are avoided. These include the protection of an area of scattered scrub that are to the south west of the application site and improvements to the management of the grassland area. Also recommendations are detailed on the management of dense scrub, in particular regards to nesting birds.

Potential impacts arising from the construction and operation of the site have been assessed and it is considered that, with the adoption of the recommendations within this report, no significant adverse effects to wildlife are likely to arise as a result of the planning application.

## 1. Introduction

This ecological survey was commissioned by Yorkley Court Community Farm for a section of land known as The Arrows. A Phase 1 habitat survey was carried out on 4<sup>th</sup> July 2014 by Grant Riley BSc (Hons), MSc.

The purpose of the survey was to identify habitats present, assess the conservation value of the survey area, the likely presence of rare or protected species, to identify any features, habitats or species which would constitute potential constraints to any development which might take place, and to make recommendations for mitigation and/or further survey work, as appropriate.

### 1.1 Site Location

Full postal address:

Yorkley Court Community Farm,  
Yorkley,  
Lydney,  
Gloucestershire  
GL15 4TZ

Location : (OSGB36)

Grid Ref = SO636059

### 1.2 Setting

The Arrows is located adjacent to the property known as Yorkley Court Farm. It is a long, linear site situated above 10 acre wood.

The site is approximately 1000 metres long by 150 metres wide stretch of land. A very approximate estimate of habitat composition is 60% dense scrub, 20% semi-improved grassland and 20% scattered scrub. This parcel of land has a single track running from a gated entrance on Yorkley Lane and is crossed by 2 public footpaths. The only permanent structures on the site is a ex-Ministry of Defence (MOD) Nissen hut(11m x 30m), and 2 adjacent outhouses (11m x 5m) & (6.5 x 4m) and concreted hard standing (46mx19m) in front of both buildings. The surrounding areas are paddock, meadow and Forestry Commission woodland, known as 10 Acre Wood.

### 1.3 Site Description

**Area A** is approximately 8.5 acres and occupies the south western section of the survey site. Part of this land was shallow mined for coal at the end of the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> Century. There are no traces of the 3 mine entries that are known to have existed on the land. A different area was surfaced mined for coal in the 1960s. There is no visible trace of this activity now. At around this time the Ministry of Defence built a depot on the land, which included the buildings that are left standing (Nissen hut and outhouses). The depot was used for off road vehicle training.

**Area B** is a approximately a 6.5 acre compartment of semi-improved neutral grassland. Grazing was believed to be continuous up until 2004 and the meadow cut or grazed sporadically in the following years.

See Appendix 1 map

## 2. Methodology

### 2.1 Phase 1 Habitat Survey

The site was surveyed in accordance with the JNCC methodology (2010) in order to produce a Phase 1 habitat map. Target notes with supplementary information or identifying the potential for protected species are also given.

The value of the site for bats, reptiles, dormice and other protected species and habitat features was also assessed. A search was made for signs of badgers and for badger setts. A search was also made for invasive plant species such as Japanese Knotweed. Target notes list plant species with an abundance score using the DAFOR scale: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare.

### 2.2 Data Search

A data search for notable species within the 10km grid square containing the site was completed using the National Biodiversity Network website ([www.nbn.org.uk](http://www.nbn.org.uk)).

A data search for sites designated for nature conservation and protected and notable species was also undertaken through the Gloucestershire Wildlife Trust/ *Gloucestershire Centre for Environmental Records* (GCER)

The search included all records within 2km of the site.

### 2.3 Nature conservation sites

**2.3.1** No statutory or non-statutory nature conservation sites are located on or adjacent to The Arrows.

**2.3.2** The nearest Site of Special Scientific Interest is Clark's Pool Meadow SSSI located some 1.9 miles to the east.

**2.3.3** The nearest RAMSAR site is the Severn Estuary located some 2.4 miles to the south-east.

## 1. 3. Survey Results

### 3.1. Habitats

For the purposes of accurate habitat survey, the sites (which are marked A and B on the plans provided) can be divided into two distinct areas.

#### Area A

#### Area B

The Arrows supports semi-natural habitats including neutral semi-improved grassland with tall ruderal habitat and scrub in the south. Semi-mature trees (over 5 metres tall) occur only occasionally on the site with individuals along both the west and eastern boundaries and around the Nissen hut. No hedgerows occur within the site. Hedgerow boundaries are non-existent or consist of dense scrub and/or overstood maturing tree species, except for the road side front of land. There is a spring and associated small stream within the scrub area to the east of the site.

The following habitat types are represented which are shown in the phase 1 habitat map in Appendix 1.

- Scrub dense/ scattered
- Neutral semi-improved grassland
- Spring and stream

Area A is predominately dense scrub, particularly in the southern and eastern areas. This area is dominated by *Salix caprea* and *cinerea* and the occasional *Quercus robur*, a majority of tree species are under 5 metres tall. The ground layer is dominated by *Rubus fruticosus* and *Epilobium angustifolium* and *hirsutum*.

An area of scattered scrub is present in the centre of this compartment and there are wide, open areas where an old track has been grazed by wildlife such as rabbit and deer, creating a complex matrix of varied sward heights. There is great floral diversity in this section and an impressive assemblage of *Orchis mascula* and *Dactylorhiza incarnata*.

A spring and stream occur in *Salix/Alnus sp.* Carr, where a small pool contains abundant *Apium nodiflorum*. The pool is immediately adjacent to the spring head, the water is relatively fast moving, the pool is very shallow, it is completely shaded by Willow Carr canopy, there is little or no aquatic edge vegetation and no ground vegetation present. This is assessed as being an unsuitable location for the presence of Great Crested newts.

**Area B** is a neutral semi-improved grassland with some areas having been grazed by horses in the last year (2013); a section of Area B is currently being grazed by a grass eating kunekune pig species.

The grass land has been cut every year for at least the last 2 years. Some parts of this area are dominated by *Juncus sp.* particularly *inflexus* and *Rumex sp.*

There are maturing trees that form the boundary of both area's A and B to the western and eastern edges of the site. There are a few stands of overstood *Corylus avellana* coppice present. Other areas along the boundary are dominated by *Rubus fruticosus*, *Urtica dioica* and *Salix* spp. These are all growing on a escarpment from previous quarrying/ mining on this occurred on this site.

See maps in Appendix 1.

## **3.2 Fauna Species**

### **3.2.1 Bats**

No evidence was found of bat roosts, the absence of any mature trees on site reduces the possibility of the presence of roosting bats, particularly in the active season. An ex-MOD Nissen hut is present with an 2 adjacent small outhouses, these shelters may provide favourable conditions for bats, however no evidence was discovered of their presence or evidence of roost, feeding posts or droppings were found.

Linear features such as the main track and high bank with established tree lines surrounding the site are likely to be used by bats whilst foraging and commuting. The extensive adjacent ancient woodland will almost certainly have significant bat populations. The open spaces, long grass and gardens present are good foraging habitat for bat species due to the invertebrates associated with it.

No work is to be done to existing buildings. Planning is for change of use of smaller Nissen hut but this is retrospective.

There are no records of bats within 2km of the survey site according to the data search with GCER and records within the 10km grid square on NBN.

### **3.2.2 Dormice**

No signs of Dormice were noted during the survey.

Dormice potentially reside in the adjacent woodland, however due to unsuitable tree cover in the total survey area, their utilisation of this site would be unlikely. The carr is dominated by young *Salix* and *Alnus* species, with little or no ground vegetation. The canopy is variable

and in places completely open. As there has been no intervention in this carr and it is considered to be unsuitable habitat for Dormice.

There are no records of dormice within 2km of the survey site according to the data search with GCER and records within the 10km grid square on NBN.

### 3.2.3 Reptiles

No signs of Reptiles were noted during the survey.

Open areas, mixed grass swards and scrub present, particularly in Area A and to a lesser extent in Area B, all have good potential to be utilised by reptile species such as *Anguis fragilis* and *Zootoca vivipara*. Some sections within Area A contain south facing banks amongst a vegetation matrix, ideal for basking reptiles. There is also water present on site and adjacent to it, which may provide suitable conditions for the presence of *Natrix natrix*. Due to the low-impact nature of the small holding projects at the Arrows, refuge and hibernacula potential for herpetofauna species is significantly increased. Conversely Impact on the reptile population of The Arrows is thought to be negligible due to the low impact nature of dwelling construction and the absence of use of any machinery.

There are no records of reptiles within 2km of the survey site according to the data search with GCER and records within the 10km grid square on NBN show as follows:

*Anguis fragilis*

|          |        |            |            |
|----------|--------|------------|------------|
| SO646065 | LYDNEY | 9/Jul/1987 | 9/Jul/1987 |
|----------|--------|------------|------------|

### 3.2.4 Badgers

No signs of badgers were noted during the survey in Area A or Area B.

Badgers are known to be widespread in Gloucestershire.

### 3.2.5 Other

Evidence of wild boars on adjacent woodland is prolific. Numerous areas of disturbed earth and other evidence suggested the presence of wild boar. The tenants have also reported wild boar sightings in both Areas A and B.

## 4. Survey Constraints

There were no particular restraints to surveys, apart from the time of year making it difficult to account for the full range of some species of flowering plants, particularly those appearing in the early spring period. Overcast conditions, preceding heavy rain may have lessened chance of sighting certain wildlife species such as birds, reptiles and invertebrates.



## 5. Recommendations

Currently, The Arrow's occupants have had little impact on the land shown in Map 1. Vehicles use an old established man-made track to arrive at the central part of the site. At present, occupants and visitor's vehicles park on the hard-standing adjacent to the hanger. There is one small yurt situated on the south western edge of the site and has been emplaced in an area of dense scrub, nearby is a small wooden hut also in dense scrub. To the south west of the eastern spring are 2 bender tents, also situated in dense scrub. There are occasional small patches of vegetable and flower gardens which have been created either directly adjacent to the main track or in areas previously dominated by dense scrub. All current and previous activity by the occupants of The Arrows appears to have been conducted in acute awareness of local flora and fauna. Their activities are organic, bio-dynamic and adhere to permaculture principles, thus potentially having a positive impact on the local biodiversity.

### 5.1 Development

Future plans for the Arrows involves a minimal and small scale series of low-impact, temporary dwellings; a mixture of yurts, geodomes and other small huts. They will be to the south west of the spring area, around the Nissen hut and up along the western ridge. There is also a proposal for areas of vegetable cultivation which are planned to be emplaced in areas previously dominated by dense scrub.

A small section of the Area B is to include ally-cropping between tree rows and establishment of mixed hedges around pastures but retaining large areas of grass, grazed by horses.

There are plans for shared kitchen and toilets and an application to change of use for the small Nissen hut for this purpose. Any structural adaptation to the Nissen hut may require bat surveys.

All plans for these low-impact temporary dwellings will have minimal impact on the land both temporally and in the long term. If any dense scrub is to be cleared for these abodes or vegetable plots, occupants are advised to act accordingly in observation of the 'Bird Nesting Season'. This season is officially from February until August (Natural England) and it is recommended that vegetation works (tree or scrub cutting) or site clearance should be done outside of the nesting season. However, in reality the nesting period may start before this and extend beyond it, in some cases. The busiest time for nesting birds is from 1st March until 31st July.

The occupants of The Arrows have been advised to avoid any impacts to nesting birds and made aware of any possible infringement of the Wildlife and Countryside Act 1981 and breaching the European Habitats Directive 1992/Nesting Birds Directive.

### **5.1.2 Protected Species**

Occupants were advised that should any protected, rare or vulnerable species be identified on the site, it may be necessary to obtain a licence to permit the proposed works to proceed in order to avoid any potential breach of UK or European law.

Species that would require a licence to disturb or destroy places of shelter include bats, great crested newt, badger and dormouse.

Species licences are only permitted for development if it can be proved that:

- a) the works are necessary and
- b) alternative mitigation or compensation can be provided to ensure that the conservation status of these species will not be adversely affected by the development proposals.

Full planning permission is usually required to disturb species protected by law

## **5.2 Habitat Retention**

**5.2.1** It is recommended that tree cover be maintained wherever possible and that any intervention in the scattered scrub of Area A to be avoided, due to the florally diverse and open habitat present.

**5.2.2** The semi-improved grassland habitats should be retained and managed to benefit both floral and wildlife diversity where possible.

**5.2.3** Some small habitat piles have already been emplaced in suitable locations and are to be further encouraged in suitable positions, i.e. where there is little or no floral diversity. These habitat piles provide good habitat for nesting birds, refuge for herpetofauna, reptile and invertebrate species. The site as a whole is an important wildlife corridor and has good connectivity to both ancient woodland and meadow habitats. Any alteration in this connectivity is advised against.

**5. 2.4** Any proposed development should be sensitively designed with the input of an ecologist and should incorporate biodiversity enhancing features wherever possible, including bird boxes, bat boxes (installed on trees or designed into new buildings), and sensitive landscaping with ecological input to include the planting of native trees and shrubs.

## **5.3 Management Suggestions for Grassland**

It is recommended that grazing or cutting is utilised in the grassland area, for the prevention of any re-establishment of coarse vegetation, brambles and eventually scrub. Horses and/or goats could potentially be employed, but both species having pros and cons, which need to be considered. It was recommended that if conditions are too wet, then it is best practice to take the horses off. The floral diversity and the many invertebrates, small mammals and birds associated with this habitat are dependent on keeping fertility low, avoiding soil damage and preventing colonisation by coarse plant species.

## Appendix 1

### Target Notes

|                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |  | <p><b>TN1. SO 63535 05830</b></p> <p>Area A.</p> <p>Dense scrub, dominated by <i>Rubus fruticosus</i>, <i>Chamerion angustifolium</i> and <i>Cirsium vulgare</i>. Scattered <i>Salix sp.</i> and <i>Prunus spinosa</i> dominate. A majority of tree species &lt;5m. Many areas impenetrable.</p>                                                                                                                                                                                            |
|  |  | <p><b>TN2. SO 63320 05363</b></p> <p>Area A. Central area of scattered scrub. Less densely vegetated, wide and open disused track, still appears to be worn by walkers and grazing species such as rabbit and deer. Good sward mosaic, high floral diversity, including good assemblage of orchids. Due to its central, corridor and sheltered position; good for invertebrates and subsequent foragers. Good connectivity and cover for wildlife utilising and commuting through site.</p> |

## Target Notes (Continued)



### **TN3. SO 63696 05833**

Spring, pool and stream.

Fresh water spring leads into pool area, *Apium nodiflorum* present. Banks dominated by *Circaea lutetiana*. Canopied by *Salix/Alnus* Carr. Water course is shallow and fairly fast moving, possible utilisation by amphibians, unsuitable and unlikely for breeding. The stream is moderately elevated and courses down into 10 Acre Wood.



### **TN4. SO 63744 06015**

Main track from Lydney road and leads to central Nissen hut. The track is bordered by dense and heavy scrub throughout.



## Target Notes (Continued)

|                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p><b>TN5. SO 63809 06016</b></p> <p>Area B. An occasionally grazed field of semi-improved neutral grassland. This area is reverting towards marshland habitat type possibly due to neglect. This area at times is dominated by <i>Juncus effuses</i>, <i>Rumex sp.</i> and other ruderal species. Some form of grazing is due to commence shortly, according to the occupants of The Arrows.</p> <p>This view is from the south eastern boundary of Area B, facing north towards the Lydney road.</p> |
|  | <p><b>TN6. SO 63898 06158</b></p> <p>This is a trackside view of Area B towards the main gated entrance, off the Lydney Road. This smaller area has recently been utilised by a grazing breed of pigs. The tenants say the pigs will soon be taken of this meadow. It was advised if they were left for much longer or in very wet conditions that overgrazing was potential. This side of Area B is much drier and has less coarse vegetation and rushes.</p>                                         |

## Appendix 1.

**The Arrows**  
**Plant Species List July 4<sup>th</sup> 2014**

**Area A**

| Scientific Name                  | Common Name           | Frequency |
|----------------------------------|-----------------------|-----------|
|                                  |                       |           |
| <i>Corylus avellana</i>          | Hazel                 | O         |
| <i>Crataegus monogyna</i>        | Hawthorn              | O         |
| <i>Fraxinus excelsior</i>        | Ash                   | O         |
| <i>Prunus spinosa</i>            | Blackthorn            | F         |
| <i>Quercus robur</i>             | Oak                   | O         |
| <i>Salix caprea</i>              | Goat Willow           | A         |
| <i>Salix cinerea</i>             | Grey Willow           | A         |
| <i>Sambucus nigra</i>            | Elder                 | O         |
|                                  |                       |           |
| <i>Dactylorhiza praetermissa</i> | Southern Marsh Orchid | O         |
| <i>Galium aparine</i>            | Cleavers              | F         |
| <i>Hypericum perforatum</i>      | St. Johns Wort        | F         |
| <i>Lotus corniculatus</i>        | Bird's Foot Trefoil   | O         |
| <i>Orchis mascula</i>            | Early Purple Orchid   | O         |
| <i>Potentilla anserina</i>       | Silverweed            | O         |
| <i>Stachys sylvatica</i>         | Hedge Woundwort       | O         |
| <i>Stellaria holostea</i>        | Greater Stichwort     | R         |
| <i>Stellaria graminea</i>        | Common Stichwort      | O         |
| <i>Trifolium pratense</i>        | Red Clover            | F         |

|                                |                    |   |
|--------------------------------|--------------------|---|
| <i>Trifolium repens</i>        | White Clover       | F |
| <i>Vicia spp.</i>              | Vetches            | F |
|                                |                    |   |
| <i>Chamerion angustifolium</i> | Rosebay Willowherb | A |
| <i>Epilobium hirsutum</i>      | Great Willowherb   | O |
| <i>Pteridium aquilinum</i>     | Bracken spp.       | F |
| <i>Rubus fruticosus</i>        | Bramble            | A |
|                                |                    |   |
| <i>Holcus lanatus</i>          | Yorkshire Fog      | F |
| <i>Juncus effusus.</i>         | Soft Rush          | F |
| <i>Fescue spp.</i>             | Grasses            | F |

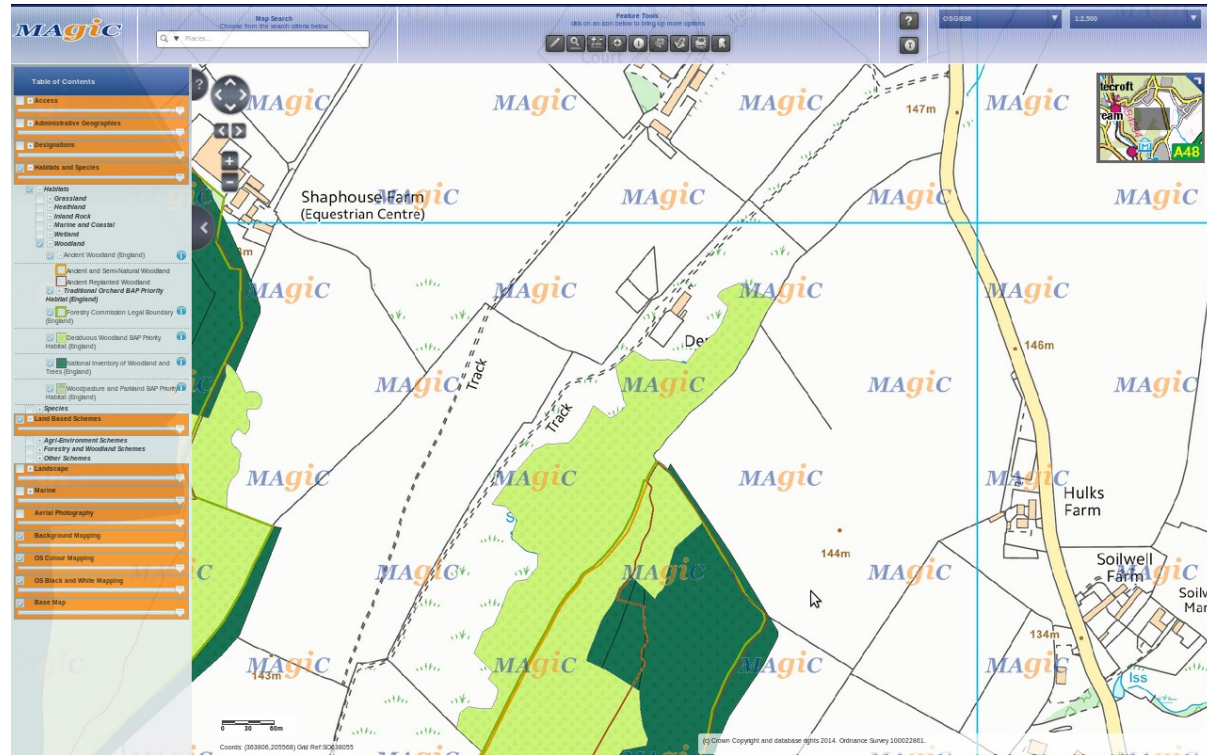
### Area B

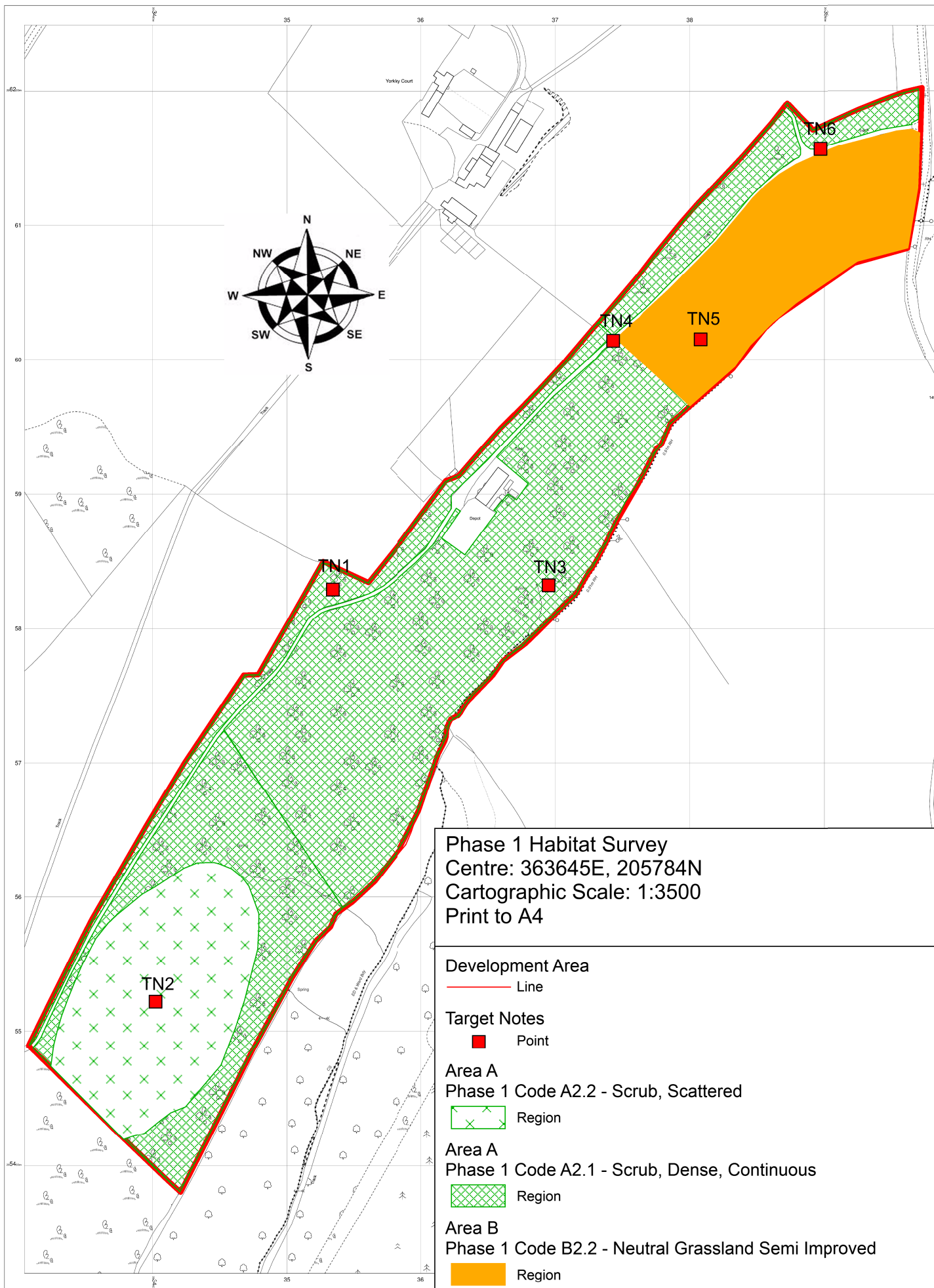
| Scientific Name           | Common Name         | Frequency |
|---------------------------|---------------------|-----------|
|                           |                     |           |
| <i>Cirsium vulgare</i>    | Spear Thistle       | F         |
| <i>Digitalis purpurea</i> | Fox Glove           | O         |
| <i>Lotus corniculatus</i> | Bird's Foot Trefoil | F         |
| <i>Prunella vulgaris</i>  | Self Heal           | O         |
| <i>Rumex sp.</i>          | Dock                | F         |
| <i>Trifolium pratense</i> | Red Clover          | F         |
| <i>Trifolium repens</i>   | White Clover        | F         |

|                            |               |   |
|----------------------------|---------------|---|
| <i>Urtica dioica</i>       | Nettle        | F |
| <i>Vicia sativa</i>        | Common Vetch  | O |
|                            |               |   |
| <i>Pteridium aquilinum</i> | Bracken spp.  | O |
| <i>Rubus fruticosus</i>    | Bramble       | O |
|                            |               |   |
| <i>Holcus lanatus</i>      | Yorkshire Fog | F |
| <i>Juncus effusus.</i>     | Soft Rush     | F |
| <i>Fescue spp.</i>         | Grasses       | F |
|                            |               |   |



## Map2. Multi-Agency Geographic Information for the Countryside Scrub and Adjacent Woodland





Phase 1 Habitat Survey  
Centre: 363645E, 205784N  
Cartographic Scale: 1:3500  
Print to A4

**Development Area**

— Line

**Target Notes**

■ Point

**Area A**

Phase 1 Code A2.2 - Scrub, Scattered

Region

**Area A**

Phase 1 Code A2.1 - Scrub, Dense, Continuous

Region

**Area B**

Phase 1 Code B2.2 - Neutral Grassland Semi Improved

Region